
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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COBALT IN FEBRUARY 1997

U.S. consumption of cobalt in the first 2 months of 1997 was 3% higher than consumption during the same period in 1996. U.S. imports of cobalt metal and cobalt contained in chemicals were 51% higher in January 1997 than imports in December 1996. Exports of unwrought cobalt and cobalt contained in chemicals were 47% lower in January 1997 than in December 1996. Trade data for February 1997 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Price update, dollars per pound of electrolytic cobalt (Source—Platt's Metals Week):

<u>Week ending</u>	<u>Price range</u>
Mar. 28	20.25-21.50
Apr. 4	21.25-22.50
Apr. 11	22.50-24.00
Apr. 18	23.50-25.20
Apr. 25	23.50-25.20
May 2	25.00-26.00
May 9	25.00-26.00
May 16	25.00-26.00
May 23	25.00-26.00

Monthly average

<u>March</u>	<u>April</u>
19.97	23.65

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
1996:				
January r/	309	147	146	602
February r/	268	150	138	556
March r/	284	131	147	561
April r/	262	113	139	514
May r/	299	125	142	566
June r/	281	125	153	558
July r/	256	153	137	546
August	292	136	139 r/	568 r/
September r/	257	126	130	514
October r/	272	132	189	593
November r/	259	128	188	575
December r/	273	129	184	586
January-February r/	577	298	284	1,160
January-December r/ 4/	3,310	1,600	1,830	6,740
1997:				
January	285	138	183	606
February	281	133	175	589
January-February	566	271	358	1,200

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	1996			1997		
	January	January- February	January- December 2/	January	February	January- February
Steel:						
Stainless and heat resisting	3	6	38	3	3	6
Tool	W	W	W	W	W	W
Superalloys	278 r/	519 r/	3,110 r/	306	292	598
Alloys (excludes steels and superalloys):						
Magnetic alloys	57 r/	111 r/	694 r/	49	56	106
Welding materials (structural and hard-facing) 3/	22	44	268 r/	22	22	44
Other alloys 4/	W	W	W	W	W	W
Cemented carbides 5/	62	124 r/	721 r/	61	60	121
Chemical and ceramic uses:						
Catalysts	69	139	638 r/	52	50	102
Driers in paints or related usage	65	130	733 r/	50	63	113
Ground coat frit	12 r/	25 r/	161 r/	20	14	34
Pigments	W	W	W	W	W	W
Miscellaneous and unspecified 6/	33 r/	59 r/	380 r/	42	29	70
Total	602 r/	1,160 r/	6,740 r/	606	589	1,200

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes wear-resistant alloys.

4/ Includes nonferrous alloys.

5/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

6/ Includes feed or nutritive additive, full-alloy steel, glass decolorizer, mill products made from metal powder, and data indicated by the symbol "W."

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

	Industry 2/				U. S. Government 3/
	Metal 4/	Oxide and other chemical compounds 5/	Scrap	Total	Metal
1996:					
January	271 r/	320	156 r/	747 r/	20,700
February	235 r/	300	172 r/	708 r/	20,700
March	237 r/	702	174 r/	1,110 r/	20,400
April	247 r/	715 r/	143 r/	1,100 r/	20,100
May	225 r/	712 r/	143 r/	1,080 r/	19,800
June	213 r/	714 r/	112 r/	1,040 r/	19,600
July	237 r/	717 r/	104 r/	1,060 r/	19,500
August	354 6/	443 6/	102 r/	899 r/	19,300
September	324 r/	326 r/	82 r/	732 r/	19,000
October	279 r/	275 r/	106 r/	661	18,900
November	283 r/	280 r/	107 r/	669 r/	18,800
December	273 r/	273 r/	182 r/	728 r/	18,700
1997:					
January	332	278	99	708	18,500
February	293	266	111	670	18,400

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Data from Defense Logistics Agency. Includes material committed for sale pending shipment.

4/ Includes metal powder.

5/ Data may include other cobalt materials.

6/ Data being questioned.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
January	515,000	\$30,000,000	33,700	\$1,550,000	276,000	\$3,480,000	613,000	613,000
February	471,000	30,000,000	57,100	2,810,000	25,600 7/	314,000 7/	519,000	1,130,000
March	540,000	36,000,000	49,800 7/	2,450,000 7/	183,000 7/	2,300,000 7/	626,000	1,760,000
April	432,000	27,500,000	147,000	6,370,000	104,000	1,340,000	566,000	2,330,000
May	475,000	28,700,000	62,100	2,730,000	55,200	786,000	533,000	2,860,000
June	600,000 8/	36,100,000 8/	82,200	3,710,000	88,800	1,170,000	682,000 r/	3,540,000
July	590,000	34,800,000	93,900	4,440,000	60,200	778,000	674,000	4,210,000
August	480,000	24,800,000	112,000 7/	2,160,000 7/	38,600	405,000	571,000	4,790,000
September	432,000 7/	20,500,000 7/	58,600	2,440,000	101,000	954,000	502,000	5,290,000
October	347,000	17,100,000	71,000	3,030,000	101,000	1,010,000	425,000	5,710,000
November	481,000 7/	22,000,000 7/	61,100	2,640,000	90,700	911,000	550,000	6,260,000
December	400,000	19,400,000	64,100	2,400,000	155,000	1,340,000	494,000	6,760,000
January-December	5,760,000	327,000,000	892,000	36,700,000	1,280,000	14,800,000	6,760,000	XX
1997:								
January:								
Belgium	14,400 7/	695,000 7/	15,700	665,000	21,300 7/	71,600 7/	31,000	31,000
Brazil	24,100	1,050,000	--	--	--	--	24,100	24,100
Canada	121,000	5,580,000	--	--	2,410	42,800	122,000	122,000
Finland	47,300	2,140,000	49,600	1,640,000	125,000	1,170,000	117,000	117,000
France	1,480	128,000	1,430	110,000	--	--	2,510	2,510
Germany	1,100	65,100	--	--	--	--	1,100	1,100
Japan	--	--	1,780	84,600	--	--	1,280	1,280
Norway	97,000	4,370,000	--	--	--	--	97,000	97,000
Russia	82,000	3,220,000	526	12,000	33,400	185,000	97,700	97,700
South Africa	749	48,600	--	--	--	--	749	749
United Kingdom	624	41,700	16,800	568,000	--	--	12,700	12,700
Zaire	75,400	3,530,000	--	--	--	--	75,400	75,400
Zambia	164,000	7,490,000	--	--	--	--	164,000	164,000
Total	629,000	28,400,000	85,900	3,080,000	182,000	1,470,000	746,000	746,000

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.

4/ Customs value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

8/ Data revised by the Bureau of the Census.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1996:						
January	5,110	\$414,000	30,600	\$452,000	10,400	\$563,000
February	6,810	531,000	89,900	731,000	16,000	651,000
March	1,340	107,000	71,200	1,370,000	21,800	1,410,000
April	3,940	213,000	48,700	954,000	19,000	1,270,000
May	3,970	339,000	34,500	694,000	19,800	1,270,000
June	2,630	108,000	17,400 4/	292,000 4/	13,800	1,070,000
July	4,540	345,000	51,000	943,000	12,300	868,000
August	8,080	313,000	84,600	2,020,000	10,500	676,000
September	2,310	221,000	16,800 5/	875,000 5/	12,500	878,000
October	483 4/	34,100 4/	47,900 4/	644,000 4/	17,500	1,020,000
November	16,000	912,000	22,600 5/	705,000 5/	9,680	714,000
December	3,180	156,000	55,700 5/	2,320,000 5/	15,300	1,100,000
January-December	58,300	3,690,000	571,000	12,000,000	178,000	11,500,000
1997:						
January:						
Belgium	2,750	158,000	1,000 5/	77,300 5/	301	15,900
Canada	69	14,800	6,060 5/	240,000 5/	446	82,100
Denmark	--	--	109	3,410	--	--
Finland	--	--	1,250 5/	85,800 5/	--	--
France	--	--	1,200 5/	94,800 5/	--	--
Germany	200	23,100	11,400 5/	186,000 5/	4,620	209,000
Japan	2,670	237,000	--	--	2,950	164,000
Sweden	227	10,200	--	--	--	--
United Kingdom	--	--	2,110 5/	90,600 5/	6,210	405,000
Zaire	--	--	9,600 5/	288,000 5/	--	--
Total	5,920	443,000	32,800	1,070,000	14,500	876,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ Data revised by the Bureau of the Census.

5/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
January	70,200	\$5,050,000	31,300	\$889,000	34,500	\$788,000	101,000	101,000
February	76,700	4,750,000	20,200	642,000	42,000	510,000	101,000	202,000
March	214,000	13,000,000	29,100	1,070,000	336,000	318,000	316,000	518,000
April	168,000	9,640,000	53,800	1,470,000	15,100	132,000	210,000	729,000
May	145,000	6,930,000	22,700 7/	689,000 7/	20,500	346,000	166,000	895,000
June	159,000	7,500,000	13,300 7/	514,000 7/	20,600	310,000	173,000	1,070,000
July	64,300 8/	2,870,000 8/	24,100 7/	575,000 7/	27,200 7/	271,000 7/	88,200 r/	1,160,000
August	88,700	3,160,000	40,000 7/	362,000 7/	26,600	292,000	124,000	1,280,000
September	58,200	2,370,000	35,600 7/	1,060,000 7/	47,800 7/	231,000 7/	95,400	1,380,000
October	50,000	2,380,000	15,900 7/	540,000 7/	31,900	104,000	69,100	1,440,000
November	84,000	3,510,000	27,400	777,000	78,100	316,000	122,000	1,570,000
December	105,000	3,340,000	54,400	1,440,000	112,000	678,000	171,000	1,740,000
January-December	1,280,000	64,500,000	368,000	10,000,000	793,000	4,290,000	1,740,000	XX
1997:								
January	60,800	2,350,000	30,300	979,000	34,100	149,000	90,700	90,700

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

8/ Data revised by the Bureau of the Census.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
1996:				
January	38,800	\$1,640,000	8,050 3/	\$105,000 3/
February	18,300	1,630,000	5,560 3/	337,000 3/
March	24,100	2,060,000	10,900 3/	130,000 3/
April	25,400	1,890,000	--	--
May	18,800	1,460,000	19,300 3/	174,000 3/
June	62,000	2,150,000	--	--
July	28,500	1,170,000	13,400 3/	496,000 3/
August	67,100	1,660,000	43,500 3/	1,050,000 3/
September	31,000	1,780,000	56,200 3/	2,250,000 3/
October	20,600	1,420,000	30,900 3/	1,260,000 3/
November	108,000	2,610,000	8,790 3/	370,000 3/
December	85,400	4,040,000	17,000 3/	629,000 3/
January-December	529,000	23,500,000	214,000	6,810,000
1997:				
January	44,300	3,020,000	24,600 3/	1,000,000 3/

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.